

# STEM



Science, Technology, Engineering and Math

## \* STEM ADVISORY COUNCIL

A collaborative effort of LIU Staff, school district administrators and teachers, local businesses and the local colleges to increase project based learning in STEM as well as showcase student learning, local career opportunities & college coursework in Science, Technology, Engineering, and Math. Through the advisory council meetings, the group plans contributions to the Teacher Institute and the Solutions Fair

## \* STEM TEACHER INSTITUTE

A professional development opportunity to learn about project based learning and integrating STEM content areas while meeting the demands of high stakes testing. Local university and high school educators will support participants as they design project based learning units with their existing curricula. Following the session, continuing support will be available in virtual formats.

## \* STEM SOLUTIONS FAIR

In May, students from schools across Adams, Franklin, and York counties will apply 21st century learning skills as they accept real-world challenges related to local business and industry services and products. Students will brainstorm, design and present solutions to their peers and businesses. Students will see a multitude of STEM opportunities available at local colleges, universities, business & industry.

## \* STEM DESIGN CHALLENGE

Students ages 9-12 apply 21st century learning skills of creativity, collaboration, communication, and critical thinking in this summer program. Additionally students must work through the design process of brainstorm, design, build, test, re-design to meet specific challenges around their chosen theme. Themes include *Fashion & Furniture*, *Green Machines*, *Builder's Showcase*, and *Carnival & Arcade*.

## *Why STEM?*

\*Science, Technology, Engineering, & Math are increasingly digital, networked and rapidly changing. To meet the recommendations of the National Academy of Sciences, National Governor's Association agenda for STEM, and Partnership for 21st Century Skills the Lincoln Intermediate Unit is committed to improving the STEM curriculum, instruction, and out-of-school activities to better prepare our local students for 21st century college and career expectations. To make this truly a community effort the LIU is partnering with area businesses, higher education, and K-12 educators to raise awareness and create additional local opportunities in STEM.

**\*21st Century Skills:** Among the most critical academic disciplines for success in a 21st century work force are those involving Science, Technology, Engineering and Math (SETDA, 2008) as well as the ability to collaborate, communicate, think critically and creatively (<http://www.p21.org>).

**\*College and Career Ready:** According to the U.S. Labor statistics, more than a million jobs will open up that require specialized technology skills in the next seven years. But there won't be enough qualified college graduates to fill them (Dohm & Shniper, 2007). Career ready is defined as able to acquire employment in a zone 3 job that provides a living wage to support a family of 4 with benefits and opportunities for advancement" (PARCC, 2012).

**\*PA Green Jobs:** Pennsylvania is among the states with the highest number of green jobs (Pennsylvania Department of Labor & Industry, 2010). Potential jobs will be in energy efficiency, renewable energy, clean transportation, pollution preventions and environmental cleanup.

*Learn more about STEM at LIU #12 via [amjohnston@iu12.org](mailto:amjohnston@iu12.org) OR [casoliday@iu12.org](mailto:casoliday@iu12.org)*